



PREVALENCE AND PATTERN OF MENSTRUAL DISORDERS AMONG NURSING STUDENTS : A CROSS SECTIONAL ANALYSIS

Ms Sivapriya S

Lecturer, College of Nursing, AFMC, Pune

Ms Shila Samuel*

Lecturer, College of Nursing, AFMC, Pune *Corresponding Author

ABSTRACT

Introduction – Menstrual disorders frequently affect the quality of life of adolescents and young adult women, especially those who suffer dysmenorrhoea and heavy menstruation [1]. As well as health problems there can be consequences such as limitations on attendance at work and school which hinder academic achievements and employment prospects

Objectives

- To determine the prevalence and pattern of menstrual symptoms among nursing students.
- To find the factors correlates of menstrual disorders.

Materials and methods

a. Type of study: Non experimental descriptive Cross sectional survey design

b. Study settings: Selected nursing colleges in Lucknow. The students of this college came from various states and different socioeconomic strata of India.

c. Sample size: Total 150 students are registered in all years of study were selected.

d. Sampling technique: Stratified random sampling

Data Analysis: Descriptive and inferential statistics to assess the correlation of pattern of menstruation with selected variables such as diet and academic stress

Results : 84.7% had always regular menstruation. None of the students had irregular menstruation always. Only 15.3% had irregular menstruation in between. Menstrual irregularities were not associated with diet, BMI or academic stress.

Conclusion: Lack of awareness about the problems related to menstruation leads to non treatment of menstrual problems and may lead to reproductive failure. The overall goal of the present study is planned to gather information concerning prevalence and pattern of menstrual irregularities among nursing students and subsequently create the awareness and understanding among undergraduates

KEYWORDS :

Menstruation is typically normal physiological phenomenon during a woman's reproductive life indicating her capability for procreation. However menstruation often associated with some degree of sufferings and embarrassment. The prevalence of menstrual disorders has been recorded as high as 87% though there is a relative openness in the society as well as commercialization has increased, the menstrual hygienic practices have not changed much. It is common observation that every woman does experience one or other type of menstrual problems in her lifetime. If persistent, menstrual disorder becomes a major gynaecological problem in adolescence and adult life [1].

Menstrual disorders frequently affect the quality of life of adolescents and young adult women, especially those who suffer dysmenorrhoea and heavy menstruation [1]. As well as health problems there can be consequences such as limitations on attendance at work and school which hinder academic achievements and employment prospects [2]. The spectrum of menstrual disorders ranges from disorder of cycle length to disorder of flow. Menstrual disorders include absence of menstruation (secondary amenorrhoea), excessive or prolonged flow (menorrhagia), light infrequent or delayed flow (oligomenorrhoea), painful menstruation (dysmenorrhoea) or premenstrual syndrome (PMS) [3].

Back ground of the study

N. Karout, S.M. Hawai and S. Altuwajiri conducted a study in 2012 to determine the prevalence and pattern of menstrual symptoms among nursing students in Beirut, Lebanon. The most common menstrual disorders were irregular frequency of menstruation (80.7%), premenstrual syndrome (54.0%), irregular duration of menstruation (43.8%), dysmenorrhoea (38.1%), polymenorrhoea (37.5%) and oligomenorrhoea (19.3%). On logistic regression analysis, there were significant associations between irregular cycles and marital status (OR 2.18) and menarcheal age (OR 4.76); oligomenorrhoea and residency (OR 2.06) and menarcheal age (OR 3.17); abnormal blood loss and menarcheal age (OR 6.92); dysmenorrhoea and marital status (OR 8.93) and residency (OR 2.04); and premenstrual syndrome and marital status (OR 2.10). Dysmenorrhoea and premenstrual symptoms were serious enough to affect daily activities or academic attendance in many cases and this is a concern for policy-makers.

Studies have shown a high prevalence of dysmenorrhoea and menstrual irregularity among female students (73% and 65% respectively) and that these problems affected the women's social

activities and school attendance [3,5]. Another study showed that the prevalence of no, mild, moderate and severe menstrual pain among Iranian women was 10%, 41%, 28% and 22% respectively [7]. A high proportion of women in other studies reported suffering oligomenorrhoea or amenorrhoea and these have been associated with body mass index (BMI) and other complications such as polycystic ovary syndrome (PCOS), hirsutism or infertility. Menstrual disorders have multiple etiologies and studies of associated variables have found relationships with diet and eating disorders, exercise and BMI, stress and chronic diseases [10].

Need of the study

Despite of extensive scientific knowledge of the biologic rhythms and physical challenges associated with reproduction and despite the availability of excellent educational material about sexuality including menstruation, adolescence knowledge about menstruation is inadequate. There is a lack of knowledge and awareness among adolescence about health issues and problems.

Apart from the physiological variation, many other factors have been found to cause menstrual disorders in adolescents. These include: environmental, nutritional, drugs, physical activities and stress. The effect of stress particularly chronic stress on females menstrual characteristics have been confirmed by an impressive body of cross sectional and prospective studies. Consistent associations have been observed for cardiovascular, musculoskeletal disorders, mental illness and both prevalence as well as severe menstrual irregularities [10].

Perceived stress in the college / university setting may take the form of academic stress. This involves multiple stressors such as academic demands, financial, time health related and self imposed type of stressor [8]. All these will put the female undergraduate under ever increasing tension. These have been associated with negative health outcomes including depression and physical illness.

Objectives

- To determine the prevalence and pattern of menstrual symptoms among nursing students.
- To find the factors correlates of menstrual disorders.

MATERIALS AND METHODS

a. Type of study

Non experimental descriptive : Cross sectional survey design

b. Study settings & Population

Selected nursing college in Lucknow. The students of this college came from various states and different socioeconomic strata of India.

c. Sample size

Based on a prevalence of 15% of women having menstrual disorders (the lowest recorded prevalence [6]) and with 5% error and 95% confidence interval the minimum sample size was estimated as 150 . Total 150 students are registered in all years of study were selected. The sample consisted 150 nursing students

d. Sampling criteria

Exclusion

- Students those who have not attained menarche
- Alcoholics and smokers
- Unwilling to participate in study

e. Sampling technique

Stratified random sampling

Informed consent was obtained from participants. The questionnaire covered information about the following demographic variables: age, age of menarche, height, weight , diet, academic stress and pattern of menstruation.

Ethical consideration

Ethical clearance was taken from the ethical committee of selected hospital.

Written informed consent was taken from the participants of the study prior to data collection.

Analysis of data

Descriptive statistics were generated.

Tab 1: Regular menstruation

	Frequency	Percent
Never	0	0
Some times	23	15.3
Always	127	84.7
Total	150	100.0

84.7% had always regular menstruation. None of the students had irregular menstruation always. Only 15.3% had irregular menstruation in between.

Prevalence of menstrual disorders

Only 15.3% of students complained about any form of menstrual irregularities related to duration of cycle, frequency of cycle and amount of flow.

Absence of menstruation

All the participants were achieved their menarche.

a. Secondary amenorrhea

Secondary amenorrhea is when a woman who has been having normal menstrual cycles stops getting her periods for 6 months or longer. Only 5.3% of subjects complained about secondary amenorrhea in any time in their life .

Menstrual irregularity associated with frequency of cycle

b. Tab : 2 Oligomenorrhoea

	Frequency	Percent
Some times	30	20.0
Always	6	4.0
Total	150	100.0

20% of the participants experienced oligomenorrhoea sometimes and only 4% had oligomenorrhoea always.

a. Polymenorrhoea

Polymenorrhoea is a term used to describe a menstrual cycle that is shorter than 21 days. Polymenorrhoea is just one form of abnormal uterine bleeding.

Only 8.7% subjects experienced polymenorrhoea some times. No students had polymenorrhoea always

Menstrual irregularity related to amount of flow

Tab 3: Hypermenorrhoea

	Frequency	Percent
Sometimes	17	11.3
Always	2	1.3

Abnormally heavy or prolonged menstruation; can be a symptom of uterine tumors and can lead to anemia if prolonged. Synonym is menorrhagia Only 2 students had hypermenorrhoea always, but 17 students had hypermenorrhoea sometimes

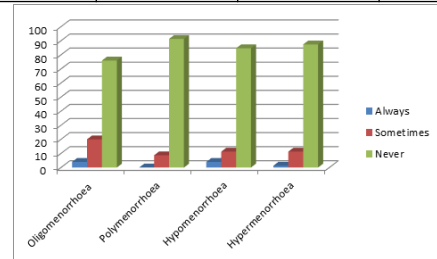
b. Tab 4: Hypomenorrhoea

	Frequency	Percent
Sometimes	17	11.3
Always	6	4.0

Hypomenorrhoea also known as short or scanty periods, is extremely light menstrual blood flow 4% of students always had hypomenorrhoea & 11.3% sometimes had hypomenorrhoea

Tab 5 & Fig 1 Comparison of prevalence of menstrual disorders among adolescence

Variables	Percentage of students		
	Always	Sometimes	Never
Oligomenorrhoea	4	20	76.0
Polymenorrhoea	0	8.7	91.3
Hypomenorrhoea	4.0	11.3	84.7
Hypermenorrhoea	1.3	11.3	87.4



Most common menstrual disorder prevalent is oligomenorrhoea. It is a great assuring data that around 80% of students are not suffering from any kind of menstrual disorders.

Tab 6: Correlation of menstrual disorders with baseline data Diet & Regular menstruation

		1. Regular Menstruation		Total
		Some times	Always	
Diet	Veg	12	76	88
	Egg Eater	0	13	13
	Non Veg	11	38	49
Total		23	127	150

There is no significant association between diet and pattern of menstruation

Tab 7: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.461a	2	.107
Likelihood Ratio	6.244	2	.044
Linear-by-Linear Association	1.496	1	.221
N of Valid Cases	150		

Tab 8: Academic stress & Regular menstruation

		1. Regular Menstruation		Total
		Some times	Always	
Academic Stress	Absent	12	92	104
	Present	11	35	46
Total		23	127	150

Tab 9: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.762 ^a	1	.052		
Continuity Correction ^b	2.869	1	.090		
Likelihood Ratio	3.541	1	.060		

Fisher's Exact Test				.083	.048
Linear-by-Linear Association	3.737	1	.053		
N of Valid Cases	150				

There is no correlation between academic stress and pattern of menstruation.

CONCLUSION

Lack of awareness about the problems related to menstruation leads to non treatment of menstrual problems and may lead to reproductive failure. The overall goal of the present study is planned to gather information concerning prevalence and pattern of menstrual irregularities among nursing students and subsequently create the awareness and understanding among undergraduates.

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